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Original Articles

A CONTRIBUTION TO THE STUDY OF METEOROLOGIC STATES ETIOLOGICALLY RELATED TO INFLUENZA EPIDEMICS.

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MODERN authorities do not lay any particular stress on the relationship of atmospheric and telluric conditions to the spread and virulence of influenza; the fact nevertheless remains, that the most severe and widespread epidemics occur in winter. The preponderance of these epidemics in this season is best shown by comparing the percentages. December, January and February are credited with about 36 per cent. of the total epidemics; while June, July and August show only 15 per cent. Then again, the epidemics in winter are much more universal and are accompanied by more complications and sequelæ.

Meteorologic states must, therefore, have some relation to influenza. But the study of this relationship is such an intricate and perplexing problem that the mind is apt to become bewildered. Yet in the light of our present knowledge of the etiology, it does seem impossible to select those atmospheric conditions which rationally may be factors. Only recently Anders (*Philadelphia Medical Journal*, August 19) attempts to discover by a careful study of meteorologic data this relationship, but arrives at no conclusions. His suggestion that a moist soil may be a good breeding place for the influenza bacilli is opposed by the characteristics, as to growth and activity, of that particular organism.

Meteorologic conditions may have a causative relation by influencing the cultivation and growth of the influenza bacillus, or by the augmentation of individual susceptibility. Each of these methods requires consideration.

The atmospheric state must be studied: first, as it exists naturally; and second, as it is modified in dwelling places. The former has been studied more or less and the conclusions are indefinite and contradictory. Thus high barometric pressure, dryness of the air, and fog have been associated with one epidemic, and have been absent in others. Let us study the usual conditions in buildings during or preceding an epidemic.

This atmospheric condition varies according to external and internal states in temperature and humidity. The temperature variations even in our extreme weather are not great. The extremes may be put between 60 and 80 degrees. Certainly, one would look in vain to find in this a factor. But in order to obtain this temperature the air in our dwellings is made stagnant; that is, very little communication is held with the external air.

During our severe winter days the atmosphere in our buildings and residences is more or less stationary, and free circulation with the telluric atmosphere is almost entirely prevented. Now this is an extraordinary difference between severe winter and summer conditions. Let us see if it can be connected in any way with the spread of influenza.

The influenza bacillus has certain peculiarities which makes it very susceptible to surrounding conditions According to Pfeiffer the bacilli rapidly perish in water, and are exceedingly sensitive to drying. Then, too, they do not develop at a low temperature, and no growth occurs below 70° or 75° F. The contagion is not conveyed by the outside atmosphere, but by particles of moist secretion thrown into the air by the coughing and sneezing of an influenza patient. Finkler has sufficiently upset the miasmatic origin of the disease ("Twentieth Century Practice"), and with the knowledge of the specific micro-organism and its peculiarities, the miasmatic nature of the influenza contagion is almost absurd.

Those conditions of the air which retain the bacilli active and allow a concentration of the number of germs are favorable to the virulence of the contagion.

It is obvious that this atmospheric state does not occur in summer, with the dry air and the free atmospheric circulation through our dwellings; but in winter, when all the doors and windows of our buildings are closed and the air is moist and warm within them, the condition is favorable for the infection of individuals.

The dissemination and spread of the disease is carried on by individuals sick with the disease and fomites, as Finkler has brilliantly demonstrated. The spread of the epidemic follows the excursions of

commerce. The original origin may be obscure, but whenever a virulent type of micro-organism commences to attack individuals its spread may be closely watched. The short incubation period and the universal mingling of thousands of individuals daily in our business centers is sufficient to explain the rapidity of its dissemination without resorting to mystic miasmata. This spreading is very much favored by the stagnation of the air in our dwellings. The department stores, theaters, office buildings, schools and other public places become the supply stations for the rapid importation of the disease into our homes.

In December of 1898 the epidemic raged in the Eastern States, and became epidemic here in January, 1899. The germ, no doubt, was carried here by some travelers. It was slowly distributed at first, but soon a sufficient number were attacked to cause an almost universal dissemination. For example, a drummer gives the disease to two or three employees in a store; in a few days they are attacked, but so frequently men, and women too, continue their work. The store in which they work is warm and the entrance closed by double doors. These employees cough and sneeze, and fill the room more or less with the contagion. The customers arrive and breathe the hot, contaminated air and carry the disease home. In summer there exists a free circulation, and the coughed particles are quickly dispersed throughout the atmosphere, and the bacilli are desiccated.

At the theaters half a dozen individuals may cough sufficiently to fill the stagnant air with bacilli, and hundreds are thus infected in one evening. At the schools, also, one pupil is capable of infecting almost the whole school in a few hours of coughing and sneezing. And in all places it is the warm, stagnant, moist air which becomes the predisposing atmospheric condition.

When the number of cases is large and many of our shoppers, clerks and salesmen are attacked, the storehouse must necessarily become teeming with germs, and in this concentration very few individuals can resist the onslaught. On a heavy shopping day the whole city may thus become infected.

The atmospheric conditions during the last epidemic, January and February, 1899, in St. Louis, were favorable for the propagation of the contagion in the manner outlined. During December a few isolated cases occurred in various parts of the city, but the maximum number of new infections took place in the early part of January. On the fifth day of this month the temperature fell from a daily mean of 41 degrees to 22 degrees. But what is more important, the daily maximum fell from 57 degrees—a temperature which still allows considerable ventilation—to 27 degrees. From the 5th to the 12th day of the month the daily maximum did not rise above 42 degrees, and the daily mean was much lower. During this time the greatest number of infections took place. The next period for dissemination occurred in the latter part of January, when the daily mean fell below 20 degrees, and the daily maximum below 30 degrees. It will be readily seen that such temperatures are not conducive to ventilation. Snow and wet weather preceded these cold periods. Such days limit the amount of daily intercourse, shopping, business, and theaters. But following these wet days a rush of activity in all public buildings is the custom and the contagion spreads rapidly during the cold days.

The following are cases of infection from actual observation:

A lady from the country visited her daughter in the early part of January. On the 6th day of the month she and her daughter went shopping; on the evening of the 9th the daughter had marked symptoms of influenza, while the mother revealed the symptoms the following day. No other exposure existed.

Here is an illustration of the infection at a theater: A lady and her two children attended the matinee about January 7th. Three days later, almost simultaneously, both children showed characteristic signs. The husband, working daily in store-houses, is very apt to bring the disease home.

A family consisting of husband and wife and two daughters were attacked January 8th. It was shown that the husband had the disease for a few days previous.

In another family the husband suffered from a mild grippal pharyngitis and a few days later his three children showed evident signs of grippe.

These cases could be multiplied. It is exceedingly common for the father to infect his home.

Another common source is the pupil at school. The following are illustrations:

A family composed of father, mother and three children were infected by the boy that attended school. He was attacked January 8th. Following him the other members of the family were successively infected.

In another family composed of mother and three children, January 10th the school-boy presented some typical symptoms. He was sneezing and a mild cough developed. A few days later the other two children showed typical symptoms.

As showing that the concentration of the poison apparently has a marked effect, the following is instructive:

The patient was myself. I had visited and revisited patients during January and February, but always remained in the room only a few minutes. In the latter part of February one day I visited a colored family consisting of three women and seven children, nearly all of whom had influenza. The air was stifling hot and not a little ventilation had been permitted by

the mother for days, for fear of giving the inmates cold. I remained in this room about one hour examining all the inmates. Three days later I succumbed to a severe form of the disease.

Besides the condition above considered, the relative humidity in buildings has some bearing. A dry air would rapidly desiccate the infective particles and thus soon render them harmless, while in an air saturated with moisture the particles would remain moist for hours, clinging to the numerous dust particles in a room. In all buildings where many people congregate the air soon becomes charged with vapor from expiration and evaporation; consequently the crowded buildings again become favorable places for bacterial supply. In residences, however, the method of heating influences the amount of humidity and saturation is more uncommon. The dryest rooms are those heated by the hot-air furnace. When outside air at a temperature of zero is raised to 65 degrees, even if almost saturated outside, it will contain a relative humidity of only 4 per cent. in the building. This exceedingly dry air is more or less fatal to the bacillus of influenza. Moreover, the currents of air produced by the hot air entering convey the desiccated germs from the room. It follows that a building heated in this way will not become a hotbed of infection.

Buildings heated by the steam or hot-water radiators have little ventilation and the air within them becomes slowly saturated with moisture. It will be seen that atmospheric conditions in our dwelling places depend on many modifying influences.

The hot, moist, and stagnant air filled with carbon dioxid has an anesthetic effect on the mucous membrane of the respiratory tract which increases the susceptibility of the person; and it is still an open question whether the cold atmosphere or the hot stifling foul air becomes the most potent predisposing factor in respiratory disease.

Closely connected with the influenza epidemic are several varieties of micro-organisms, particularly the streptococcus pyogenes and diplococcus lanceolatus. In poorly ventilated rooms these may also become proportionately augmented in number. They are found in the dust which permeates the air, and in direct proportion to the stagnation become dangerous. This has been particularly observed in the Bethesda Foundling Home, in which diseases of the respiratory organs become more or less frequent, according to the deficiency of ventilation. When all the windows must be closed in order to maintain the proper temperature bronchitis, pharyngitis, and pneumonia are common. It has been found very effective at these times to thoroughly fumigate the nurseries. In this way the complications of influenza have been enormously reduced in virulence and number. This fact has been repeatedly demonstrated, so that little or no doubt can exist of its effective action.

Electrical influence, it may be stated, also varies outside and inside. We know that positive electricity is greatest in amount during high barometric pressure, and strongest in winter. So it is only incidental to other conditions mentioned. In buildings there is usually an absence of positive electricity; at least none exists in the air; but during the cold days in those buildings in which the air becomes very dry strong electrical influences are usual. A person walking across a dry carpet, by friction of his shoes on the carpet becomes charged with positive electricity. Sparks fly every time he touches or comes very near an electric conductor. But it is questionable that this electricity has any potency in an epidemic.

The study of cold as a predisposing cause by increasing the susceptibility must not be ignored. But its value as such a factor is dwindling more and more as our studies in pathology advance. In the last influenza epidemic it was a significant fact that those persons who spent much of their time outdoors had a milder attack than those who remained indoors constantly. Persons received a severe infection of this disease who had not left the warm house for weeks. And it really seemed beneficial for a patient —at least in the milder attacks—to breathe cold air. Nevertheless, one cannot deny that a sudden exposure causing a general depression of cellular activity may aid in precipitating an attack.

The conclusion of this study is as follows: Influenza is a contagious disease transmitted by infected particles in the air, and its transmission is fully explicable on the grounds of non-ventilated rooms and the great variety of human intercourse. The meteorologic states favoring the extension of an epidemic are those that insure stagnant and foul air in public buildings.

Notes and Items

"LITHOPEDIAN" is a term which is used to designate the products of an extrauterine fetation which has passed from the abdominal cavity to the bladder. At a recent meeting of the Paris Society of Surgery, Hue reported two cases that occurred in his practice, and in which the foreign bodies were removed by a suprapubic cystotomy.

THE movement for the establishment of sanatoria for the treatment of consumptives finds its reflex in Russia, where it is proposed to employ the various monasteries, which are generally situated in dry, healthful, and frequently elevated locations. If this is done, it should be preceded by a thorough study of the bacteriologic environments of a Greek priest. The average inhabitant of a Greek church monastery would certainly need a thorough disinfection if he is to act as attendant upon the sick.

THE Eleveth Annual meeting of the Tri-State Medical Society of Alabama, Georgia and Tennessee, will be held in Chattanooga Tuesday, Wednesday and Thursday October 24, 25 and 26, 1899. Those desiring to read papers should send titles to the secretary, Frank Trester Smith, Chattanooga. The indications are for a large and successful meeting.

LATE advices show that the bubonic plague has appeared in Southern Russia. In addition, cases have been found in Oporto. At Madrid great uneasiness is felt, and the people are indignant because the authorities in Portugal have been aware of the presence of the plague, but have suppressed the truth. It is rumored that the plague has appeared at Naples and Palermo.

IT IS REPORTED in the daily papers that a physician was assaulted in Brooklyn while attending to the injuries of a non-union working man. In civilized warfare the person of the physician, nurse, and hospital attendants are held inviolate as are other non-combatants. Reports from the campaign in the Philippines say that the Tagals, which is the official name of the particular variety of subjects now in rebellion against Uncle Sam, are also in the habit of firing upon the medical attendants. These latter being unarmed and unable to retaliate, furnish pleasing sport to the pot-hunting Tagals. The barbarians of Brooklyn, who are in the habit of assaulting medical men in the discharge of their duties, belong to the labor union which includes the employees of the surface lines of transportation. In annexing the Philippines and other semi-civilized peoples, they should assimilate well with our home talent.

"IS LIFE worth living?" is a question that has been asked by philosophers since the world has had these useful functionaries. They have summed up the debit and credit side of the vital ledger; some have found the balance upon one side and some upon the other. It is only a few years since Mallock devoted a large book to the consideration of this question, but the results of his reasoning left us in doubt. Some philosophers have wisely answered this question by asking another: "Is life worth living? Well, it depends." Recently a Dr. Monroe, in the *Cincinnati Lancet-Clinic*, has contributed a few pages to this all-important question, and it is interesting to note that his final conclusion is "that it does not pay." We do not remember to have seen anything recently from the pen of a medical man on this subject. Perhaps for the practicing physician it does not pay. The doctor says: "Do not the sorrows, troubles and trials of life outweigh our joys and pleasures?" This philosophic question is on a par with many others which are being asked and to which no very satisfactory answer can be given. Among them are: "Is marriage a failure?" "Does it pay to smoke?" "Are drunkards happy?" A thousand questions could be asked to which no very satisfactory answer could be given.

Probably there is something in the physician's life that leads naturally to pessimism; he sees more of the seamy side of things than does the average man, and his statistics, dealing largely as they do with the unfortunate, the maimed, the unhealthy, necessarily show that the sum of human misery is much greater than the amount of human happiness.

A LETTER was recently sent to a Chicago physician which reads as follows:

"Dear Doctor:—It so happens that I have occasion to refer operation cases to the city for treatment. I have been sending them to a gentleman who has recently treated me in a way I don't like, and I am therefore desirous of making arrangements with some one else. What portion of the fee do you give the doctor who brings the case? I am free to say that I have always had 50 per cent. This is not too much, because I always know just what a patient can stand, and have him worked up for good fee beforehand. This is a good farming country, you know. An early answer will oblige, as I have several cases that ought to be operated on very soon."

It is difficult to say what the writer of the foregoing means, when he says that he is not being treated right. The man who is willing to give him half is uncommon, and certainly seems to be doing the "fair" thing.

A Bacteriologic Tragedy.—

A gay bacillus, to gain him glory,
Once gave a ball in a laboratory.
The fête took place on a cover glass,
Where vulgar germs could not harass.
None but the cultured were invited
(For microbe cliques are well united),
And tightly closed the ball-room doors
To all the germs containing spores.
The Staphylococci first arrived—
To stand in groups they all contrived;
The Streptococci took great pains
To set themselves in graceful chains;
While somewhat late, and two by two,
The Diplococci came in view.
The Pneumococci, stern and haughty,
Declared the Gonococci naughty,
And would not care to stay at all
If they were present at the ball.
The ball began, the mirth ran high,
With not one thought of danger nigh.
Each germ enjoyed himself that night,
With never a fear of Phagocyte.
'Twas getting late (and some were "loaded"),
When a jar of formalin exploded,
And drenched the happy dancing mass
Who swarmed the fatal cover glass.
* * * * * *
Not one survived, but perished all
At this bacteriologic ball.

—J. LEE HAGADORN, M.D.,
in Southern California Practitioner.

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THE TONSILS AS AN INFECTION ATRIUM.

If any function is subserved by the tonsils, it has escaped general recognition by the physiologists. Some of the larger recent text-books do not refer to these organs at all and it is not generally known that they perform any useful function in the economy. Of course, one may assume for purposes of argument, that nothing is created uselessly, and that consequently there must be an office which these organs fulfill. Granting the truth of such a doctrine, there is abundant evidence that the removal of healthy tonsils does not injuriously affect the system in any way; the removal of diseased tonsils is a matter of very grave importance.

The literature of from fifteen to twenty-five years ago is filled with reference to the importance of these structures in relation to infectious diseases. One writer, the late J. S. Knox, contended that the frequent association of inflammation of the tonsils lead him to regard tonsillitis as a form of rheumatism. The clinical data advanced by this writer was sufficient to show a very intimate relation between rheumatism and tonsillitis. His contention that tonsillitis was a form of rheumatism, in the late and more extended knowledge of the infectious diseases, would lead one to reverse the statement and say that rheumatism is a form of tonsillitis. The diseased tonsil, with its extensive crypts, forms a rich soil for the growth of micro-organisms and furnishes one of the most frequent sources of general infection. It is probable that systemic disorders have their origin in these structures more frequently than is generally supposed.

The prompt removal of diseased tonsils is imperative; it should not be a mere amputation of the strucures, leaving some of the distended and inflamed follicles to convey infection, but it should be that thorough removal which leaves the space between the posterior and anterior pillars of the fauces perfectly smooth.

THE INFLUENCE OF BATHING UPON THE EAR.

Not a few ears are permanently damaged and their hearing impaired by no judicious advice in the matter of bathing. Particularly is this the case in sea bathing and fresh water, open-air bathing. There are comparatively few chronic troubles of the ear that may not be aggravated by bathing, unless suitable precautions are taken. These consist in wearing a rubber pad over the external ear, which may be so adjusted as to exclude water entirely from the external meatus; or, in milder cases, specially prepared wool may be packed into the external auditory meatus and the drum thus protected from the direct impact of water, which often serves to aggravate a pre-existing inflammation. It is probable that sea and fresh water does not have a deleterious effect upon the ear drum, but in diving, splashing, or the action of the waves, the water may be thrown with considerable violence, sufficient to mechanically injure the drum. Another form of ear mischief comes from jumping from a considerable height, striking the water feet first. In some of these cases, particularly if the mouth is open, water may be carried up the nostril and violently into the internal ear. The violent distension of the eustachian tube and the impact of water into the internal ear may cause considerable damage, even if it has not existed before the direct action of the fall.

Special care should be taken in directing patients who go to the seashore to protect the ear, because it is in this class of cases that chronic ear troubles so frequently occur, and they also form a group of cases which are often developed by open-air, salt water bathing.

FEEDING AND CLOTHING OF TROOPS IN THE TROPICS.

That the United States will have to maintain a considerable army in the tropics is now definitely determined, and the necessity of studying the army ration from the standpoint of climate is apparent. It is difficult to say how many deaths were to be attributed to the defects in the army ration as a diet in a hot climate, but the Commissary General has apologized for these glaring blunders of the late war, and we are told that they were due to the haste with which the troops were called out, and to the fact that there was no knowledge possessed by the Commissary General's department to guide them in the selection of proper foods We do not know just how long it will take for knowledge of this kind to percolate into the minds of this department, but several years ought not to elapse before there is a recasting of the army ration, adapted for service in the tropics. Recently in the *Army and Navy Journal* Inspector General Clarke has an article on practical observations on the hygiene of the army in India. His observations

show that the most abstemious are the most healthy men in India, and that no change contributed more to the health of the European resident than the discontinuance of the heavy midday luncheon and the reduction of meat in the bill of fare of the better classes to one meal a day. He states that the greatest defect in the diet of the European soldier in the tropics is the want of a due amount of vegetables, and to this are due many of the complaints which assail the armies. It seems, therefore, to Inspector Clarke that the arrangements for feeding soldiers in India, not only as to the food supply, but as to the times at which it is consumed, could be greatly improved.

If, after a generation or two of scientific study, the dietetic management of the army in India is still in such a backward state as described by Clarke, what is to be expected for our own Commissary Department after the exhibition of hopeless incompetency shown in the late war? It is incumbent upon the authorities to begin immediately the study of dietetics, clothing, and housing of troops in the tropics. For years to come it will be necessary for us to employ a large body of troops in policing Cuba, the Philippines, and Puerto Rico, and these problems must be faced. In the military service there is altogether too much adherence to routine and precedent; because the army ration is adapted to life upon the high table lands in Montana is very good reason why it is not adapted to the conditions prevailing in tropical countries with great humidity. The tendency to intestinal involvment in these cases is very great, and it should not be aided by an improper diet.

The clothing of troops also needs attention. The use of woolen goods, confined by heavy straps to the body, which in the temperature and moisture prevailing in tropical countries is converted into a poultice, should be discontinued, even though the army regulations prescribe the width and thickness of the belts, and that privates should always appear on dress parade with their coats neatly buttoned. It is possible to devise a simple, light, neat uniform, which shall admit of rapid transpiration. Such should be adopted, even if it does violence to all the traditions of the service.

BACTERIAL LIFE IN THE ARCTIC REGIONS.

In view of the great importance that we are accustomed to attribute to bacterial growth in relation to organic life, it is exceedingly interesting to learn how these relations adjust themselves under altogether changed conditions. Our knowledge of the bacteriology of the arctic regions so far has been very scanty; but for a few experiments made by Nystrom (putrefaction of meat), a few remarks by Nansen and Johansen concerning the purity of the atmosphere, and the general experience as to the absence of infectious diseases in these regions, we know nothing definite about it. A systematic study of bacteriologic questions made by Dr. Levin during the polar expedition of Natthorst will therefore not fail to attract general attention. His experiments were conducted under the most favorable conditions in the island of Spitzbergen, in Bear Island, and in King Charles' land.

For the analysis of the atmosphere, altogether about 20,000 litres of air were filtered at different points; only in one experiment (and this one was made on board ship), three cultures of bacteria developed, while in all others all of the plates remained sterile, or showed only a few colonies of mould fungi. On the ground of this excessive purity of the air the author explains the fact, that during a sojourn of four months in the polar regions not a single case of disease was observed among the crew of the ship (28 men).

Numerous samples of water, too, were examined; water from the surface of the sea and from varying depths (to 4,000 feet); water from glaciers, from snow, etc. The average result was one bacterium to eleven c.c. of water, the importance of which fact becomes apparent if we remember that one c.c. of the water of the Seine at Paris can contain as many as 600,000 germs. Among these germs were peptonizing and non-peptonizing forms, cocci, bacilli and spirilla.

Not only of especial but of very general interest are the observations of the author made on the intestinal contents of a great number of animals living in the arctic regions, as polar bears, seals of different kinds and a great variety of birds, as well as of invertebrates. Specimens of this material removed under the strictest caution and inoculated on suitable culture media, almost always proved to be perfectly sterile; only in a few instances a few colonies of a bacterium were obtained, which, from its cultural peculiarities, seemed to be the coli commune. As we know very well that many of the intestinal bacteria do not grow on our culture media, the author verified these results by microscopic investigation of the intestinal contents; he was unable to demonstrate in his microscopic specimens any bacteria whatsoever.

Although it seems highly desirable to see these observations confirmed by another investigator, the *modus procedendi* in these researches is so simple that it can hardly be seen where there should be a chance for a mistake. If this be so, Levin's observations will have a far-reaching importance for the question which Pasteur, as early as 1880, asked himself: Are bacteria necessary for the act of digestion? It would seem that the failures in the experiments of Schottelius were due to other causes than the absence of bacteria, and that the conclusions which Nuttall and Thierfelder drew from their own experiments were more nearly in accord with the truth.

Current Medical Literature

ANATOMY AND PHYSIOLOGY.

A Further Contribution to the Automaty of the Fetal Heart.—PRISNER* found in a fetus of the sixth month, which died very shortly after its premature birth, an automatic action of the heart. The organ was removed from the body and placed in a physiologic salt solution, and yet continued to beat for some minutes afterwards. The author considers this phenomenon more frequent than was supposed by Neugebauer, who first described it. The nervous system of the fetus is not so closely related to the various organs of the body as in the adult. In this particular the fetus may be compared with lower animals. There is a probability, and further investigation may prove it, that this post-mortem automaty of the fetal heart is due to a specific function of certain heart ganglia, as is the case in lower animals.

The Mechanism of the Resorption and Secretion of the Human Stomach.—D. ROTH and H. STRAUSS† investigated the changes which are seen in hypertonic, isotonic and hypotonic solutions of salt and glucose and in distilled water introduced into the stomach. A hypertonic salt solution shows a decrease of the total molecular concentration (found by the determination of the reduction of the freezing point), in such a way that the chloride of sodium concentration decreases considerably, and that this decrease is partially compensated by the addition of other soluble substances. The same holds good for hypertonic glucose-solutions, which, however, disappear much more slowly from the stomach than salt solutions. The change of concentration is brought about by the fact that there is a transfusion of water from the mucous membrane towards the contents of the stomach, that at the same time a part of the dissolved substances is transported from the latter into the blood; and thirdly, that dissolved serum-constituents pass from the blood into the stomach-contents. The phenomena is the same in isotonic solutions, which proves that changes are not due to the differences of osmotic pressure, viz., to merely physical processes, but that for this purpose a vital activity of the epithelium of the mucous membrane, a secretory action must be assumed. In hypotonic solutions we find either decrease of concentration, or the concentration is not changed conspicuously, or finally the concentration increases if the physical energies, against which the vital processes of the diluting secretion contend, come out superior. The latter secretion is not always parallel to the specific HCl secretion, but is seen, too, in cases in which no HCl is found. The jejunic secretion showed almost always like the withdrawn test-breakfast a concentration inferior to that of the blood-serum. The determination of the molecular concentration by means of determining the reduction of the freezing point promises in many directions to be an exceedingly fruitful method.

*Centralblatt für Gynäkolgie, August 26, 1899.
†Zeitschr für Klin. Medicin, Vol. 30, p. 192.

A Short Description of Radiographs of Ten Fetuses.—BADE* describes the radiographs of ten fetuses ranging from 3 cm. in length and 2 gm. in weight to 14.5 cm. in length and 135 gm. in weight. He notes in their turn the appearance of the various bones of the skeleton. This offers a new method of studying and investigating the ossification of the cartilage and the order in which they ossify.

EYE, EAR, NOSE AND THROAT.

A Novel Treatment of Certain Forms of Headache, Deafness, and of Tinnitus Aurium.—E. L. VANSANT† reviews the cases presented in a previous paper, continues their history to the present time, and adds a few cases that serve to further illustrate the condition present and the results obtained. The method of treatment was by means of syringing the nasal accessory sinuses with a stream of hot, dry air, under pressure. Attention is also called to the beneficial results of this hot-air treatment in cases of deafness and tinnitus aurium caused by middle-ear catarrh. The apparatus used is described and an illustration of it given. The treatment, when properly carried out, is not painful, but is rather agreeable to the patient.

Synechiotomy of the Stapes for Improving the Hearing in Chronic Suppurative Otitis Media Residua.—E. B. DENCH,‡ by synechiotomy, means division of adhesions about the stapes. The procedure can be easily conducted under cocain anesthesia, or if this produces unpleasant constitutional effects, a solution of eucain may be used. As this latter drug causes hyperemia of tissues, its application should be followed by that of a sterilized solution of suprarenal extract. This will sufficiently control the engorgement caused by the eucain to assure a clear view of the field of operation. Knowing the position of the stapes, it is a comparatively simple matter, after local anesthesia has been established, to divide these adhesions, although the vesicle itself may be completely hidden from view. A sharp-pointed knife is introduced into the middle ear in the upper posterior quadrant close to the tympanic ring. The knife is carried inward until the bony wall of the tympanum is encountered. It is then swept downward, the point being still kept in contact with the internal tympanic wall. If carefully conducted, the operation is absolutely painless. Of twenty-six cases operated on,

*Centralblatt für Gynäkolgie, August 26, 1899.
†Phila. Med. Jour., Sept. 9, 1899.
‡N. Y. Med. Jour., Sept. 9, 1899.

improvement was shown in all but one. After-treatment is simple; if the field of operation has been properly sterilized, it is only necessary to occlude the meatus with a pledget of sterilized cotton. This should be changed daily and at the same time the meatus wiped out with sterilized cotton. After four days, if there is no discharge, the cotton may be inserted only when the patient is in the open air or in a dusty place. After ten days it may be left out altogether.

Adeno-Carcinoma of the Nose; Report of a Case.—J. E. NEWCOMB* reports a case occurring in a woman 61 years old. The first indication of any disease was bleeding from the left naris which occurred almost daily for six months, stopping on its own accord. She had lost some flesh and strength, and at times there was a slight watery discharge with offensive odor. Examination showed the left naris considerably occluded, the middle turbinate enlarged and the mucosa covering it appeared to be in a condition of polypoid degeneration. Two or three fleshy proliferations were about it; there were no globular enlargements, and no manifestations of pressure symptoms. A portion of one of the fleshy masses was removed and proved to be adeno-carcinoma. Radical operation was refused. Two or three weeks later the mass had reproduced itself in the same situation. The daily dribbling hemorrhages continued and at times the offensive odor becomes very perceptible. The occlusion of the nostril is gradually increasing.

Dysphonia; Relief with the Use of the Galvanic Current.—T. C. CHRISTY.† Dysphonia is the result of any interference with normal respiration and phonation and may be accompanied by either pain or cough, or both. It is due to any interference with physiologic functions of the glottis and true cords, generally from acute inflammatory causes; is found in cases of trachoma of the true cords known as singers' nodes, in cases of lithemic throat, in gouty and rheumatic conditions, in cases of enervation of the larynx, from general debility or localized paresis, is often present during pregnancy. Mild forms are occasionally due to gastric conditions, elongated uvula, stenosis of larynx, chronic use of tobacco and alcoholics, pathologic changes in the subglottic space. Attention was attracted to the use of the constant current through experience with its application in a case of acute laryngitis. Four cases are cited, showing the beneficial effect of this method of treatment. As a curative agent in laryngeal and tracheal affections, the galvanic current is easy of application, is soothing and agreeable to the patient, relieves the congestion, pain and irritation, does not excite pain or spasm of the glottis or trachea, relieves the swollen lymph glands, cures more promptly than any other agent. Patients recognize its value and return regularly for its application.

*N. Y. Med. Med. Jour., Sept. 9, 1899.
†Phila. Med. Jour., Sept. 9, 1899.

A Fallacy of the Rest-Cure Treatment.—G. M. GOULD* refers to the numerous cases being treated by this method, in which the cause of the nervous, hysterical condition is eye-strain. It has been said that hyperchlorhydria and other functional gastric troubles are the principal affections relieved by the rest-cure; these gastric derangements are frequently the result of eye-strain. These facts are emphasized: 1. It is positively criminal negligence to ignore eye-strain in any case requiring the rest-cure treatment. 2. It is not enough to know that the oculist has examined the eyes, especially if it has been done without a mydriatic. 3. To mydriaticize a pair of eyes for a month or two would often do more good, would certainly be more logical, would be an infinitely better means of differential diagnosis in obscure nerve trouble and functional diseases than to put the patient to bed for the same time.

Albuminuric Retinitis.—WEST† claims that there are two forms of albuminuric retinitis—an exudative and a degenerative form, which stand in strong contrast in the following respects: 1. The degenerative is associated with granular kidney; the exudative with parenchymatous kidney. 2. The exudative is inflammatory and probably toxic in origin; the degenerative consequent on vascular changes and more or less mechanic in origin. 3. In the exudative form, even in extreme forms, the recovery may take place with little or no defect of sight, but in the degenerative, if there is any impairment of sight, it is usually progressive. 4. The diagnosis is easy in the exudative form, being an interesting by-phenomena of chronic parenchymatous nephritis—an affection, the existence of which is obvious enough, while in granular kidney the degenerative often makes diagnosis certain in cases which have hitherto been obscure. 5. While each form indicates a grave form of renal disease which may of itself prove fatal, in granular kidney it indicates in addition all those dangers to which arterial disease exposes the patient.

Atrabilin, a New Suprarenal Preparation.—Atrabilin is a preparation made from a substance of the suprarenal capsules which is not influenced by light or air. It forms a light yellow, slightly opalescent fluid with a smell similar to that of meat extract. According to the experiences of WOLFBERG,‡ the action of this remedy upon the eye is caused by a very energetic stimulation of the sympathetic nerve. Very noticeable is the ischemia, which is not confined to the finest superficial conjunctival vessels, but extends

*Jour. Amer. Med. Assn., Sept. 9, 1899.
†Lancet, August 19, 1899.
‡Wochenschr. für Therapie und Hygiene des Auges, 1899, No. 40.

to the larger and deeper, the ciliary vessels; it influences the pannus also, and the vessels pathologically found in the tissue of the sclera. The author says that the effect of a drop of atrabilin in an eye disfigured by old trachoma with pannus crassus is startling; the same effect is obtained in vascular parenchymatous keratitis. In such a case he saw, after instillation of the remedy, the acuity of vision increase from $\frac{5}{50}$ to $\frac{5}{15}$, while the injection subsided upon its continued administration. The latter is the more indicated the deeper the ciliary injection is located (iritis, cyclitis, episcleritis). The author uses the remedy in a dilution of 20 and 50 per cent., but he uses, too, undiluted atrabilin. If his experiences can be corroborated by other observers, the remedy will represent an exceedingly valuable addition to the ophthalmic armamentarium.

INTERNAL MEDICINE.

Tetanus of Nineteen Days' Duration Successfully Treated With Antitoxin. — W. M. JAMES* reports a case of tetanus coming on six days after the receipt of an injury to the head in a man 43 years old. Antitoxin was given in doses of 20 c.c. at first every six hours, and later every three hours, and finally reduced to 10 c c. every three hours. After the eighth day the antitoxin was stopped and the patient made a good recovery. On two different occasions there was some delay in getting the antitoxin and the symptoms at once became more serious; upon the renewed employment of the antitoxin rapid improvement at once occurred.

A Case of Neuralgia Parasthetica Treated by Reaction of the Femoral-Cutaneous Nerve —A. SOUQUES† describes a case of neuralgia parasthetica in a woman, which first made its appearance after a period of unusual physical strain. The seat of pain was in the left side, and most pronounced in the region of the left trochanter. The attacks occurred at irregular intervals; sometimes she would be free from them for a month or more. The pains were severe enough to require morphine for their relief. The skin over the seat of pain was anesthetic. Each attack lasted from ten to fifteen minutes. Owing to the severity of the pain, and the serious interruption to the patient's activity caused by it, an operation was performed. Resection of the nerve was made. No return of the symptoms was noted and the general condition of the patient is much improved.

Report of a Case of Malta Fever. — W. COX‡ reports a case in which there was a low fever, lasting 91 days, and showing the typical undulatory character and marked daily remissions. Quinin had no effect on the temperature. No malarial organisms were found in the blood and Widal reaction was entirely negative. On testing the blood with a culture of the micrococcus melitensis of Bruce there was marked agglutination in 25 minutes, in dilutions of 1 to 60. The dilution of 10 and 1 to 20 showed marked reaction in five minutes. Clinically, and also by the serum-test, this case supports the view that Malta fever may be endemic in San Juan, where this case occurred. The fact that there were so many cases in the general hospital at San Juan—certainly not typhoid fever — in which the malarial organism was not demonstrated and on which the administration of quinin had no effect, makes it probable that many more cases might have been proven to be of this type.

The Colorado Climate as a Remedy for Phthisis. A. MANN.* Colorado unites in its climate the special features of most value in cases of phthisis. To the direct stimulating effect of the altitude are added great dryness of air and soil, seasons of moderate temperature and sunny skies, permitting outdoor life the year round. Owing to the rarity and dryness of the atmosphere, the sun's rays pass through without greatly heating it, consequently the shade is always comfortably cool, while invalids can lead an outdoor life and sit in the sun on verandas on most days through the pleasant winters. Cold is much less felt, because heat is much less rapidly lost than in a denser and more humid atmosphere. The dryness of the air has an evident beneficial effect locally on the diseased areas in the lungs, as is shown by the improvement in the physical signs. At the same time, the low temperature of the mountain air exerts a powerful influence upon the whole economy; circulation is more active, nutrition and all metabolisms go on more vigorously, and the tone of the nervous system is heightened.

Scarlet Fever Reproduced by Inoculation; Some Important Points Deduced Therefrom — J. W. STICKLER† reports ten cases, each of which was inoculated with mucus obtained from the throat and buccal cavity of a patient who had a mild attack of scarlet fever; prior to use, the material was treated with carbolic acid, the addition of about $\frac{1}{600}$ part of the acid being made. Conclusions reached are: 1. The mucus of the throat and mouth has been shown to contain the contagium of the disease. 2. The early eruptive stage of scarlatina is exceedingly infectious, because of the presence in the discharges from the mouth and throat of the special poison of the disease. 3. Care should be taken not only to disinfect these parts as perfectly as possible, but to keep the tongue, mouth and lips moist constantly, if possible, in order to prevent the contagious principle from being forced into the air of the

*N. Y. Med. Rec., Sept 9, 1899.
†Revue Neurolgique, July 30, 1899.
‡Phila. Med. Jour., Sept. 9, 1899.

*Phila. Med. Jour., Sept. 9, 1899.
†N. Y. Med. Rec., Sept. 9, 1899.

room by the exhalations of the patient. 4. Mouth and nose wipes should be used, and they should be destroyed by fire at once. If fire be not available, disinfecting solutions should be used strong enough to render the poison inert. 5. Soiling of the bed-clothing and personal apparel with mouth discharges should be prevented. 6. The toys or implements of any sort that can be boiled or subjected to the strongest germicidal solutions should be given the patient. 7. Those who minister at the bed-side should be especially careful as to personal contamination and disinfection from the moment they enter the room. 8. The nostrils should be taken thorough care of, as the morbific matter which finds its way into these parts will, in a dry state, easily find its way into the atmosphere of the room, thus making the spread of the disease more probable.

Dust in the Etiology of Tuberculosis. — M. GIRSDANSKY* believes that the process of sweeping serves as the most effectual means of spreading tuberculosis. The broom, far from serving any hygienic purpose, is the cause of the maintenance of organic dust in the atmosphere of the large cities of the world, and as such is the most important cause of the existence and spread of tuberculosis, probably also of various other infectious diseases, and should therefore be abolished. The carpet is an unhygienic article, serving as a fine breeding ground for vegetable parasites, necessitating the use of the broom and duster, and thereby becoming a reason for the existence of organic dust. The only proper and safe way of procuring cleanliness of the floors and streets of our large cities is by the free use of water as a cleansing agent, in the shape of showers, sprinkling wagons, hose, mops, etc. All floors and floor coverings of the home and street ought to be so constructed as to facilitate the free use of water in the shape of shower or mop as a means of procuring cleanliness.

Relative Toxicity of Cocain and Eucain.— A. H. PECK† recapitulates the results of his experiments on this subject as follows: 1. The action of cocain is inconstant; one never knows whether the symptoms occasioned by like quantities of the drug, under like circumstances, will be similar or dissimilar. 2. The action of eucain is constant. 3. The first action of cocain on the heart is that of a depressant, and on the respiration it is that of a mild stimulant, the after effects being, on the heart, that of a decided stimulant, and on the respiration that of a decided depressant. 4. The first action of eucain on both heart and respiration is that of a stimulant, the after effects being that of a decided depressant. 5. Cocain causes death in animals by paralyzing the muscles of the respiratory apparatus, the heart's action continuing for a short time after breathing ceases. 6. Eucain causes death in animals by paralyzing the muscles of the heart and of the respiratory apparatus, they ceasing to operate simultaneously. 7. Eucain in toxic doses nearly always causes nausea and occasionally vomiting. 8. Cocain is much less nauseating and scarcely ever causes vomiting. 9. Eucain is decidedly a diuretic, causes renal discharges in a majority of instances in which a toxic dose is used. 10. Cocain is not a diuretic to any appreciable extent. 11. The pupils of the eyes, in nearly all cases of cocain poisoning, do not respond to light and the eyes are more or less bulging from their sockets. 12. The pupils in most cases of eucain poisoning do respond fully to light and there is rarely bulging. 13. The action of toxic doses of eucain is more like that of a paralyzing, tetanoiding, convulsion-producing agent, the plantar and cremasteric reflexes nearly always responding. 14. Toxic doses of cocain cause general anesthesia in connection with the other symptoms in a majority of cases. 15. Fine tetanus, of all striped muscles of the limbs, and Cheyne-Stokes' breathing nearly always occurs with the use of cocain, but seldom does either occur when eucain is used. 16. Cocain is at least three times more toxic than beta cocain, and alpha eucain is as toxic as cocain. 17. Boiling does not destroy the efficacy of cocain, but it does modify it, and boiling in no degree lessens the efficacy of eucain.

A Suggestion as to the Treatment of Grave's Disease by the Administration of Bile by the Mouth, Hypodermically, and Intra-Thyroideal; With Cases.—ALLAN.* The case reported is one of fully developed Grave's disease. All the usual symptoms were present. Absence of bile from the dejecta and an abundance of pale urine, notwithstanding the sweating, suggested a probable paresis of the secretory function of the liver cells. The administration of powerful cholagogues had no influence upon the secretion of bile. Bile was administered, eight grains every four hours, with almost direct benefit. Fifteen grains of bi-carbonate of soda were given to insure the alkalinity of the intestine, and antipyrine was given night and morning as a sedative. After the third week hypodermic injection between the shoulder blades was supplemented for the administration by the stomach. This was continued for five days, after which injections were made into the substance of the thyroid gland. The improvement was found so satisfactory that after a short time only 120 grains twice weekly were administered by the mouth, and this was continued for three months. Of the more persistent symptoms exopthalmos, tachycardia, tremors, the exopthalmos disappeared

*N. Y. Med. Jour., Sept. 9, 1899.

†Jour. Amer. Med. Assn., September 9, 1899.

*Lancet, August 26, 1899.

unnoticed; then the tachycardia, and after this the tremors. The thyroid enlargement did not disappear so rapidly, probably due to the irritation from the injections. The good results from the use of the bile can only be explained in one way, which is, an action upon the secretion from the thyroid gland.

Disease of the Pancreas.—F. E. WALLACE.* It is essential to make a very careful examination of the feces and urine in cases in which we are undecided as to the diagnosis of pancreatic disease, inasmuch as in affections of the pancreas there is incomplete digestion of fats and starches, with diabetic and fatty stools. Cystic degeneration seems to be the most common disease of the pancreas, possibly because this condition can be diagnosed early, while other cases remain unrecognized. Hemorrhage and acute suppuration are also considered together with a report of a case of the latter and the results of post-mortem examination. Although the results of laparotomy so far have not been encouraging, it is only through early diagnosis and operative procedure that the large percentage of mortality can be reduced. Complete removal of the pancreas is followed by glycosuria in a majority of cases and may be fatal, so that it should be avoided if possible. Exploratory incision and thorough investigation should lead to the decision as to the best methods of procedure.

Diet in Typhoid Fever.—ABBOTT.† The object of our diet for typhoid is to give some food that will be digested before it reaches the lower bowel, and if any residue should remain it must be unirritating. We most certainly have not the ideal food in milk, especially when given, as is the usual custom, a glass every two hours; for on post-mortem examination large, hard curds are always found. It is true, if the milk is mixed with lime water, barley water, seltzer water, etc., this is done away with to a certain extent. The writer in the treatment of his cases of typhoid does not limit them to milk, but allows them butter-milk, eggs, custards, rice, etc. These are not withheld until the fever has disappeared for a week, but are given throughout. Fruits, such as baked apple, are also permitted, if no diarrhea is present. It is well to permit three or four hours to elapse between feedings. Alcohol should be reserved for a time when stimulants are necessary and imperative.

The Use of Iodopin in Determining the Function of the Stomach.—WINKLER and STEIN.‡ Iodopin, a chemical combination of iodine and oil, is recommended by the authors in the determination of the mobility of the stomach, the activity of the bile and gastric juice, and the perviousness of the pylorus. When subjected to gastric digestion iodopin is not affected in the least, while pancreatic juice and bile have the power of breaking it up into its component parts, and thus liberating iodine. This is very quickly absorbed and excreted, and is demonstrable in the saliva. Paper permeated with starch and a 5 per cent. ammonium-persulphate solution is used as an indicator, and the saliva tested every fifteen minutes. The slightest amount of iodine in the saliva manifests itself through a blue staining of the paper, to which the saliva is applied. If the mobility of the stomach be normal, the reaction should take place in fifteen minutes, and not later than forty-five minutes after the ingestion of the iodopin. The authors cite some forty-six cases variously affected, in which it was used for diagnostic purposes. In a case of carcinoma ventriculi with ectasia the reaction took place only at the end of four hours.

Intestinal Treatment of Tuberculous Peritonitis.—H. T. BYFORD* has come to the conclusion that the improvement which follows abdominal incision in cases of tuberculous peritonitis is due to the preparatory and after treatment that belongs to abdominal section. There is no doubt that the medical treatment ordinarily used for subacute and chronic tubercular peritonitis is in some respects similar in nature to that belonging to peritoneal section, but it deviates in laying more stress on intestinal rest, intestinal depletion and intestinal disinfection, *i. e.*, it deviates in the most essential parts. We should endeavor to keep the alimentary canal as aseptic as we do after abdominal section. Two or three liquid stools should be produced daily by salines. Eight or ten grains of salol, guaiacol or an equivalent should be given three or four times daily to aid in disinfecting the alimentary canal, and possibly in producing some effect on the bacilli. The same rest in bed is necessary as after abdominal section. In subacute and chronic cases opium should be given only to check diarrhea that resists other medication. Diet must be fluid and in regulated quantities, so as to produce no intestinal gas, until the subacute symptoms have passed, and then only such solids may be allowed as will neither leave a solid residuum nor produce gas either in the stomach or intestines. Patients are kept in bed till all abdominal tenderness is gone and the evening temperature is almost normal. Tonics, stimulants and general remedies that have been found curative of tuberculous infection are not to be neglected.

Four Cases in which the Symptoms and Signs Suggested Volvulus of the Transverse Colon.—HUNTER.† The cases reported presented typical symptoms of volvulus, and were relieved in a very

*Jour. Amer. Med. Assn., September 9, 1899.
†Northwestern Lancet, August 15, 1899.
‡Centralblatt für innere Medicin, Aug. 19, 1899.

*Jour. Amer. Med. Assn., September 9, 1899.
†Lancet, August 19, 1899.

unique and simple way. It was found in each case that a half turn to the right caused an increase of pain, in all probability, by further twisting the pedicle. The author then had the patient, while lying perfectly flat, make three complete turns towards the left. The pain promptly disappeared, as well as the tumor where such existed. If this view be adopted, axial rotation in the horizontal position might be employed in cases of sudden and severe pain in the regions of the abdomen to diagnose the existence of a volvulus.

Albumoses in Dietetics. — ZAHORSKY.* Great results were anticipated upon the introduction to the profession of pre-digested foods. As a normal food for healthy infants it has been abandoned. The objections to their use are as follows: Infants acquire a distaste for the food in a short time; it frequently induces nausea and vomiting; diarrhea occasionally supervenes; digestive functions are weakened; nutrition is not superior, and, finally, healthy growth is not a common result. We know that albumoses, when absorbed as such, act as a poison in the system. It is necessary that they be changed into an albumin upon absorption by the action of the intestinal columnar cells. Therefore, in those cases in which the mucous membrane of the intestine is involved, one is not justified in employing the pre-digested food, except in a very small amount, when it seems to stimulate the cells; but even for this it is better to employ some drug. The pre-digested food may be employed in those cases where healthy intestinal epethelium exists, and a lessened or absent secretion of digestive enzyms is demonstrable. This makes the field very narrow. The same results have been observed in the use of albumoses for adults.

The So-Called Typhoid-Pneumonia. — SMITH.† As the term typhoid-pneumonia is now used, we have it referring to three separate disease groups: 1. Pneumonia running a typhoid course and with outspoken typhoid symptoms, but in which the infection is in no way due to the typhoid bacillus. 2. The combination of a genuine typhoid fever, with a genuine lobar pneumonia, induced by the pneumococcus. 3. Cases of typhoid fever in which the prominent symptoms of inflammation of the lungs are possible to be ascribed to the typhoid bacillus alone or to this bacillus in conjunction with some other infective organism. After a thorough discussion of each of these subdivisions, he draws the following conclusions: 1. In view of the fact that the majority of pneumonias occurring in the course of typhoid fever are not caused by Eberth's bacillus, but by the pneumococcus: 2. That asthenic pneumonias, with so-called typhoidal symptoms have nothing in common, so far as etiology is concerned, with typhoid fever; it would seem advisible, with our present knowledge, to discard the term typhoid-pneumonia as savoring too much of inaccuracy. For those cases proven without doubt that the pneumonic process as well as the typhoid are both due to the bacillus of Eberth, we still have the term pneumo-typhoid.

A Case of Puerperal Septicemia Treated with Antistreptococci Serum; Recovery. — MAISEY.* On the fifth day after labor the patient developed symptoms of puerperal fever, and within forty-eight hours from this time had a temperature of 104°. The injection of 10 cubic centimeters of antistreptococcic serum, made on three consecutive days, reduced the patient's temperature to the normal, and she made from this time on an uneventful recovery. Since every precaution was taken during labor, the perineum healed nicely, and the infection occurred four days after labor, the author attributes the mishap to the fact that the nurse had a purulent discharge from the nose.

Clinical Pathology of the Peripheral Nervous System in Pulmonary Tuberculosis. — Only a few points of the extensive paper of R. SCHMIDT† can be mentioned here: In connection with the tuberculous process in the lungs are found certain disturbances of the peripheral nervous system, which must be considered either as a consequence of local, chiefly mechanical, action on neighboring nerves (plexus bronchialis, nervi intercostates, nervi recurrentes) or as consequences of diffusely acting toxic agents. Among the first is especially the phenomenon of the unilateral plexus pressure pain, which corresponds by its localization to the diseased apex, then the frequently concomitant homolateral paresthesia, as in early forms of pulmonary phthisis and in hemoptysis. Tuberculosis seems to be the etiologic factor for a number of acroparesthesias. The latter are characterized by their frequency in male phthisis, by their frequent concurrence with acute, catarrhal pulmonary involvements, by their unilateral occurrence, by the unilateral and at the same time homolateral plexus pressure pain, etc.

Tetanus Treated with Carbolic Acid. — D. F. WOODS.‡ The patient, a boy of twelve years, trod on a sharp nail, which penetrated his foot. Several days later symptoms of tetanus developed; intense rigidity extended along the neck, back, chest, abdomen and extremities. Local treatment consisted in scraping the site of the injury and soaking the foot in a weak solution of carbolic acid. Ten minims of a 10 per cent. solution of carbolic acid were given hypodermically, followed in fifteen minutes by twenty

*Medical Council, September, 1899.
†Maryland Medical Journal, September 2, 1899.

*The Lancet, August 26, 1899.
†Wiener Klinische Wochenschrift, 1899, No. 27-29.
‡N. Y. Med. Jour., Sept. 9, 1899.

minims, and fifteen minutes later thirty minims were injected. This amount was continued throughout the day every half hour with half a grain of cannabis indica; at night the latter was stopped, but the carbolic acid was given according to circumstances. If comparatively quiet the patient was not disturbed, but when the interval was prolonged one drachm was given hypodermically. On the second day the symptoms ameliorated, and the acid was administered every two hours in half-drachm doses of a 10 per cent. solution. On the third day the patient could swallow, and then a drachm of the solution in glycerine was given every three hours till the spasms ceased. After this one drachm was given three times a day, gradually diminished until all rigidity had left, which was not till three weeks after the attack. Urine showed smoky appearance and characteristic odor on the second day, but there was no perceptible irritation of the kidneys or bladder and no pernicious sequelæ.

Sequel to a Case of Diabetic Coma Successfully Treated by Saline Transfusion; Death 243 Days Afterwards from Coma. — OLLIVER.* During a diabetic coma the patient received an intravenous injection of 2½ pints of physiologic salt solution. He recovered from this attack and lived 243 days, in apparent ease. At the end of this time he died from coma.

Studies in Tuberculosis.—MARAGLIANO† and his collaborators report their continued investigations. They inoculated horses and cows with an alcoholic extract of tuberculinum aquosum, which kills healthy guinea pigs in proportion of 1 to 20,000 and forms a stable substance. In this way they obtained a serum of 2,000 antitoxin units per c.c, and this serum keeps guinea pigs alive, which have been intraperitoneally inoculated with a fatal dose of living tubercle bacilli. If from an animal thus inoculated and protected, peritoneal exudate (containing lymphocytes and free, stainable tubercle bacilli) is withdrawn and injected intraperitoneally into a fresh animal, the latter remains healthy. Likewise it was impossible to grow these bacilli on culture media. A series of other investigations made with a stable tuberculosis toxin showed that the human blood-serum contains alexins. They are said to be easier recognizable the younger the individual. Less are present during convalescence, and they are entirely absent in debilitated individuals. They are not found in the blood of advanced tuberculous patients, but they are present in the blood of cows, calves, goats, horses, and above all, of the turkey. The quantity of these protective substances increases with the injection of antitoxic serum; these injections produce new protective bodies, as can be shown experimentally. A disciple of MARAGLIANO (BODANO) injected tuberculin into the parenchyma of the lungs and into the trachea, and convinced himself that in this way broncho-pneumonic foci and circumscribed pleuro-pneumonias, with small round cell infiltration, can be produced; on the part of the pleura it goes to the formation of fibrinous exudates, while in the lung tissue caseous foci are formed. These results, held together with Auclair's observations, demonstrate that the local changes in tuberculosis are caused by the bacillary toxin.

*The Lancet, August 26, 1899.
†Gazzetta degli ospidali, 1899. No. 76.

NERVOUS AND MENTAL DISEASES.

The Relations Between Epileptic Attacks and Sleep.—A. PICH* reminds us that the great majority of nocturnal epileptic attacks (the latter amounting to about two-thirds of all epileptic attacks) occur a short time (about an hour) after falling asleep, or in the last hours before awakening, at the time of deepest sleep. Plethysmographic investigations have shown that at the time of the first deep sleep a decrease of the quantity of blood circulating in the brain takes place, and that to the maximum of the depth of sleep corresponds a minimum quantity of blood. Perhaps one is allowed to infer that the appearance of the attacks in the epileptics is connected in some way not yet explained with these changes of the circulating conditions in the brain.

The Power of Suggestion.—A. MACDONALD† defines hypnotism as an artificially induced sleep in which there is suggestibility and hallucinability with insensibility to most impressions, and upon waking remembrance of little or nothing that has taken place. It is a universal fact that personal magnetism is a powerful aid to the hypnotist. In order that the suggestion may operate effectually, it is indispensable that its expression be comprehended by the subject, and that it obtain a certain adhesion on his part. The attention must be concentrated and one must think only of the phenomena to be produced. The relations of emotion and aboulia with reference to suggestion are discussed. Aboulia is a condition in which volition is impaired or lost. Cases are reported showing the power of suggestion (1) in causing a cathartic effect from a bread pill; (2) in the cure of obsession, and (3) in moral education.

Psychotherapy or Suggestion as a Cause and Cure of Disease.—H. H. SEELEY.‡ It is by recognizing the hypothetical interrelation of two personalities in one individual, that we can explain most of the phenomena induced by suggestion. An idea becomes implanted in the mind by either a known or an unknown process, and there it is taken up by the subconscious personality and developed, till its ef-

*Wiener medicinische Wochenschrift, 1899, No. 30.
†Phila. Med. Jour., September 9, 1899.
‡N. Y. Med. Rec., Sept. 2, 1899.

fects appear in some easily recognized results. Conviction or belief that a certain effect is to follow a given act is helpful and conducive to this unconscious transformation; but conscious belief is not always essential, provided that the subconscious ego is convinced, and so stimulated into activity. Thus many of the physiologic, pathologic, and curative phenomena we so frequently observe may be accounted for by alterations, metabolism and nutrition produced by the subconscious expectations aroused by suggestion. Eight cases illustrating these results are cited.

Traumatic Neuropsychosis; Report of a Case.—C. E. IDE.* The patient, a farmer fifty-one years old, who had been perfectly well in every respect, was thrown from a bridge through shying of his horses, and was unconscious for a short time. He was able with difficulty to walk afterward, but suffered from pains all over the body and general tremor. He was in bed for one week, during which time he complained of dull occipital headache, insomnia, pain in back and arms, dysphagia, imperfect vision, tinnitus, was despondent and had morbid fears of seeing people. After getting up many of the symptoms continued; his movements were slow and feeble, there was marked hyperesthesia of skin of back, retarded conduction, tremor of hands and arms, cold extremities, cardiac irritability, palpitation, various gastro-intestinal disturbances, as well as sensory and motor symptoms. Dislike of seeing people persisted, there was despondency, he became easily excited. He lost flesh and strength rapidly, and at the end of a year showed no inclination or capacity for work. Previously he had been a hard-working farmer.

OBSTETRICS AND GYNECOLOGY.

Some New Instruments to Facilitate the Operation of Myomectomy.—HOWARD KELLY† calls the enucleation of myomata, myomectomy, and proposes to perform the same in all cases where the uterus does not reach the level of the umbilicus, and in selected cases even when the tumified organ overreaches the limits prescribed. He does not, however, advise such an operation in a case where the organ is in consequence of age or for other reasons useless; he advises against it further, where rapidity is desired. Myomectomy is more dangerous than removal of the entire uterus, and in the operation hemostasis is often difficult. Rubber gloves should be worn by all concerned. One of Kelly's new instruments is a sort of enucleating spatula, with a serrated edge. In operating an incision is made into the tumor, which is then separated from its bed with the enucleator and lifted out with forceps. Another new instrument referred to is a little "pick," for the removal of tumors varying from a pea to a cherry in size. These instruments save time, prevent trauma—so no slivers are left behind, and reduce to a minimum the handling of tissues, which are to be returned to the sensitive peritoneal cavity.

Interstitial Pregnancy and Report of Case.—C. F. SMITH* reports a case occurring in a woman, twenty-four years old, who died quite suddenly, after complaining of attacks of abdominal pain for two days. The peritoneal cavity was found to contain three quarts of blood, most of which was fluid; but the cul-de-sac contained a large clot. Extensive laceration of the uterus was found, just to the right of the median line, and on the posterior aspect. Tubes, ovaries, and ligaments, were normal. Neither tube nor ligament showed any indication of inflammation. The whole fundus showed degeneration and thickening of the wall, a portion being very soft. A ruptured amniotic sac was found containing chorionic villi, which had no connection with the uterine cavity. This was enclosed in degenerated uterine tissue. The uterine walls in other portions were firm and normally thickened for a two-months' pregnancy. The decidua had formed in the uterine cavity, and the cervix contained a mucous plug. Sections of the uterus were found to present extensive parenchymatous and fatty degeneration, the fatty portions blended into the parenchymatous, and thence into normal tissue.

Accidental Wounds in the Female Bladder.—F. H. WIGGIN.† Injuries to the inferior surface of the bladder generally occur in the course of separations of the uterus from the wall, when the peritoneal cavity is entered by means of an incision made in the anterior vaginal wall. A case is offered in illustration of this type of injury, in which the wound in the bladder was at once closed by means of three Lembert sutures of fine silk, introduced through the muscular coat only. The patient made an uneventful recovery. Accidents are likely to occur to the posterior wall, while the operator is keeping up adhesion to the intestine and omentum to diseased pelvic organs or tumors. The wound rarely extends through the mucous membrane, and a few interrupted Lembert sutures usually suffice. The most dangerous and least often injured portion of the bladder is in the region of the trigone. With a good knowledge of anatomy and surgical technic, a successful result may almost invariably be looked for. With the technic at present at our command wounds of the bladder made in the course of operating, whether extra-peritoneal or intra-peritoneal, should be closed

N. Y. Med. Jour., Sept. 9, 1899.
†Am. Jour. of Obstet., Aug., 1899.

*N. Y. Med. Rec., Sept. 9, 1899.
†Jour. Am. M. A., Sept. 9, 1899.

immediately, and the operation continued as if the accident had not occurred, and notwithstanding the fact that drainage is not used, there will be little or no danger of peritonitis, extravasation of urine or hemorrhage.

A Case of Septic Infection After Miscarriage; Recovery After the Use of Atmokausis.—BEUTTNER.* Patient developed septicemia after miscarriage. The placenta clots and membranes were removed, and intra-uterine injections of a 1 to 2,000 solution of sublimate, were used. The infection seemed to have extended beyond the uterus, and these measures were all of no avail. Atmokausis was employed, as recommended by Pincus, and the temperature began to fall within two days afterwards, viz.: when the destroyed mucous membrane was exfoliated. The author recommends this procedure highly.

Organic and Functional Diseases, Incident to the Menopause, Treated by Electricity and Cataphoric Medication, With Report of Cases.—OVERALL.† The change of life in women may be sudden and attended with a stormy outburst of neurotic symptoms, or it may be insidious in its nature, extending over several years. In either case they should not be regarded with indifference. Several cases are reported by the writer presenting the usual neurotic symptoms, common to the menopause and were subjected to the following treatment with excellent results: When no organic diseases of the genital organs are present good results have been obtained from the simple application of a secondary faradic current of high tension up and down the spine. Should this method fail to give relief the same currents are applied directly to the cervix uteri, or into the uterine cavity. When endometritis also exists, cathodal galvanic applications should be made to the endometrium. The common practice of giving sedatives or narcotics is specially contra-indicated, except in rare cases.

The Operation of Complete Tear of the Perineum.—HOWARD KELLY‡ bespeaks in this article the advantages of direct suture of the freed ends of the sphincter ani muscle. He has proven its efficacy in thirty-five cases, twelve of which are reported in detail. Two points are important in preventing infection here, viz.: (1) the sphincter extremes must be denuded without a rectal wound being made; (2) one must avoid leaving dead spaces in the perineum. In repairing the complete tear an incision one centimeter across and one in front of the anal orifice is made; the ends of it correspond to the extremities of the torn sphincter. After the vaginal rent has been repaired in the usual manner, the operator's left index finger is inserted into the rectum and working backward and upward upon it from the cross incision an apron dissected up. This apron, when elevated, allows of the sphincter being brought together and sutured. After this has been done the deep perineal wound is closed by special "figure 8" sutures and the skin sewn together. Now the "apron" is puckered with a few stitches, and the operation is complete.

A Case of Atresia Vaginæ with Hematokolpos and Hematometra.—SCHMID* reports a case of atresia vaginæ with hematokolpos and hematometra successfully operated on. The patient gives a history of having had retentio urinæ at an early age, which leads the author to conclude that this case of atresia vaginæ was not congenital but acquired. There existed probably at the same time with the urinary disturbances a vulvo-vaginitis, which finally led to the lesions between the walls of the vagina. As to the etiology of the vulvo-vaginitis nothing definite can be said. It is, however, frequently specific.

Parturition Complicated by Fibroids of the Uterus; Post-Partum Hemorrhages; Infusion; Recovery.—MONTAGUE and MOSS-BLUNDELL.† The patient was delivered of a still-born child by the high-forceps operation. Within a short time afterwards a severe post-partum hemorrhage occurred, which in spite of the usual methods continued until the patient's condition became alarming. She was in a semi-conscious state; pulse very weak, face pallid, respiration rapid and sighing. Infusion was deemed advisable. From the very commencement her condition improved, and she finally recovered. The author attributes her recovery entirely to the infusion of physiologic salt solution.

The Post-Partum Use of the Abdominal Binder.—TUCKER‡ claims that the routine use of the abdominal binder after parturition owes its practice greatly to tradition. It is advised by some on the ground of its good effects in "the preservation of the figure, compression of the abdomen, restoration of intra-abdominal pressure, compression and fixation of the uterus, prevention of relaxation of the uterus and consequent hemorrhage and promotion of involution." These different points are all subject to discussion. According to Tucker, it is clearly demonstrable that the bandage has none of the good effects claimed for it by majority of the physicians; but, on the contrary, in a number of cases may do harm.

Total Vaginal Extirpation of a Ruptured Uterus, in Spite of Pelvis Narrowed by Osteo-Malacea.—HUGO HÜBL§ describes a case of forceps

*Centralblatt für Gynäkologie, Aug., 19, 1899.
†Medical Council, September, 1899.
‡Am. Jour. of Obstet., Aug., 1899.

*Centralblatt für Gynäkolgie, August 26, 1899.
†Lancet, Aug. 19, 1899.
‡Medical Council, September, 1899.
§Wiener klinische Wochenschrift, Aug. 24, 1899.

delivery in which extensive rupture of the uterus occurred. In spite of all treatment bleeding continued after removal of the child. The placenta could only be partly removed by the introduction of the hand, so an operation was deemed needful. Vaginal hysterectomy was performed with ease by the "splitting" method, and this though the pelvic outlet was very narrow. Castration as a remedy for osteo-malacea was next done, with the result that the patient made a rapid recovery. The author calls especial attention to the removal of the enlarged uterus, which contained placenta, through a greatly diminished canal.

An Infrequent Sort of Uterus Cyst, Removed Together with the Uterus by Laparotomy.—NEUGEBAUER.* The literature on uterus cysts is very scant. According to the modern view they have their origin from the fundus glands of the uterus, from the Wolffian body, from remnants of the Wolffian duct, from cyst formation within fibromata and myomata, etc. The author reports and describes the removal of a large cyst of the uterus, together with the uterus by laparotomy. He is in doubt as to its origin, however, but seems inclined to attribute it to the persistence of remnants of the Wolffian body.

SURGERY.

Case of Ruptured Gastric Ulcer; Recovery.—THOMSON.† Within five hours after the rupture of the ulcer the patient was operated upon. The leakage was found to occur on the anterior surface of the stomach close to the lesser curvature and just below the cardia. After the operation great care must be given to the feeding. The earliest possible recognition of these cases and prompt action are of the greatest importance. On the eighteenth day after the operation an exudative pleurisy developed, the unpleasant symptoms of which were quickly relieved by operation, and the patient made an otherwise uneventful recovery.

Some Complications Resulting From Rectal Operations.—W. M. BEACH.‡ Some of the complications following operations or injuries on the fixed rectum, or that portion limited above by the levator ani, and below by the corrugator cutis ani, are: incontinence, stricture, elongation of the anal rectum, ulceration and hemorrhage, loss of rectal sense organs, suppuration and phlebitis. Any or all may be the sequelæ to operations for the removal of hemorrhoids, fistula, adenoids, fissure, or malignant neoplasm, but only the minor operations are here considered. Incontinence is probably the most common complication arising from the operation for fistula, and is liable to follow divulsion in syphilitic and tubercular patients. Stricture is the result of vicious cicatrices consequent on the unskillful use of the clamp and cautery. Elongation of the anal rectum is a corrolary to stricture. Destruction of the rectal sense organs, as occurs in Whitehead's operation, leads to delayed defecation and constipation, with the usual train of symptoms. Healing by first intention should always be encouraged if possible, by the free use of catgut sutures, and the period of convalescence thereby materially lessened.

Treatment of Aneurysms by Extirpation.—J. C. OLIVER* reports a case of traumatic aneurysm of the popliteal artery, occurring in a syphilitic subject, and discusses the subject of aneurysms in general, but more particularly those which develop in the popliteal space. In this region the method of extirpation presents some advantages and some disadvantages. Among the former are that the disease is directly attached; the circulation of the leg is interferred with much less than after ligation, there is a greater certainty of cure. The objections to extirpation are said to be that the operation is a harder one than that of tying the superficial femoral; that there is the likelihood of the vessel in the immediate vicinity of the aneurysm being the seat of the disease; that there is greater danger of infection with its attendant consequences, and, finally, that it requires more time. From a consideration of these facts and a reference to statistics of results of both methods of treatment, these conclusions seem justified: 1. The operation by extirpation is the most scientific of all methods thus far proposed for the treatment of aneurysms of the extremities. 2. It is by far the safest method. 3. It gives a greater percentage of cures and a less percentage of deaths than any other method. 4 The operation by extirpation should be resorted to without previous attempts at cure by any other method.

Some Details in the Treatment of Acute Intussusception in Infants.—COLLIER.† In view of the unsatisfactory results obtained in the treatment of acute intussusception in infants by rectal injection, and the great mortality in prolonged abdominal sections, the author recommends a combination of the two methods. Of five cases he succeeded in saving but one by rectal injection. In the other four the tumor disappeared, but death followed nevertheless, showing that reduction had not been complete. If operation be resorted to, a free abdominal incision made, and much manipulation and exposure of the bowel is required, the result is almost invariably bad. The author recommends, therefore, rectal injections with manipulation of the tumor through a small incision admitting but one finger. His results from this procedure have been very satisfactory.

*Centralblatt für Gynäkolgie, August 26, 1899.
†Lancet, August 19. 1899.
‡Jour. Am. M. A., Sept. 9, 1899.

*Jour. Am. M. A., Sept. 9, 1899.
†The Lancet, August 26, 1899.

Society Proceedings

MISSISSIPPI VALLEY MEDICAL ASSOCIATION.

The coming meeting of this influential body promises to be the most notable and successful in its history. It is estimated that between 1,500 and 2,000 physicians will be in attendance. The following is the programme:

GENERAL SESSIONS.

Tuesday, October 3, 10:30. A.M.

Call to order by the Chairman of the Committee of Arrangements, Dr. Harold N. Moyer. Prayer. Address of welcome on behalf of the city and State. Address of welcome on behalf of the profession of Chicago. Announcements of the Committee of Arrangements. Report of the secretary. Report of the treasurer. Miscellaneous business. Address of the President, Dr. Duncan Eve, Nashville, Tenn.

Wednesday, October 4, 9:30 A.M.

Report of Committee on Credentials. Appointment of Nominating Committee. Report of Judicial Council. Address in Medicine—"Typhoid Fever"—Dr. J. A. Witherspoon, Nashville, Tenn. Reading papers.

Thursday, October 5, 9:30 A.M.

Report of committees. Address in Surgery, Dr. Lewis S. McMurtry, Louisville, Ky. Reading papers.

Friday, October 6, 9:30 A. M.

Report of Committee on Nominations. Installation of officers-elect. Reading papers.

MEDICAL SECTION—PAPERS.

Tuesday, October 3, 3 P. M.

1. Enzymes and Immunity. Chas. T. McClintock, Detroit, Mich.

2. Recent Physio-Chemic Researches as to the Physiologic Action of Lecithin and Other Organic Phosphorus Compounds. L. H. Warner, Brooklyn, N. Y.

3. Communal Hygiene. Ernest B. Sangree, Nashville, Tenn.

4. Some Phases of Malaria—Quinine in. Wm. Britt Burns, Deckerville, Ark.

5. The Treatment of Cystitis. M. F. Lee, Columbus, Ohio.

6. Diabetes and its Constitutional Treatment. Elmore S. Pettyjohn, Alma, Mich.

Wednesday, October 4, 10:30 A.M.

7. The Treatment of Pulmonary Tuberculosis by Inhalation of Antiseptic Nebulæ. Homer M. Thomas, Chicago, Ill.

8. Management of Cases of Pulmonary Phthisis at Health Resorts. Charles F. McGahan, Aiken, S. C.

9. The Treatment of Acute Lobar Pneumonia. Ramon F. Garcin, Richmond, Va.

10. The Art of Diagnosis. E. L. Larkins, Terre Haute, Ind.

11. The Successful Treatment of a Case of Grave Disease as an Autointoxication. Charles L. Minor, Asheville, N. C.

Wednesday, October 4, 3 P.M.

12. Do We Need to Think? Wm. O'Neal Mendenhall, Richmond, Ind.

13. The Evils, their Causes, and Remedy that will Edify Medicine in the United States. A. M. Osness, Dayton, Ohio.

14. Two Cases of Typhoid Fever, with Unusual Complications, in Very Young Children. E. B. Montgomery, Quincy, Ill.

15. Further Observations on the Treatment of the Abdominal Viscera Through the Colon. Fenton B. Turck, Chicago, Ill.

16. Report of a Case of Complete Hernia of the Pregnant Uterus. W. V. Anderson, Toledo, Ohio.

Thursday, October 5, 10:30 A.M.

17. Legtomeningitis. Frank Parsons Norbury, Jacksonville, Ill.

18. Pathogenesis of Functional Nerve Diseases and its Prophylactic Indications. John Punton, Kansas City, Mo.

17. The Association of Hysteria with Organic Disease of the Nervous System. Philip Zenner, Cincinnati, O.

18. The Clinical Psychiatrist in General Practice. C. H. Hughes, St. Louis, Mo.

19. Temperament and its Influence. Albert E. Sterne, Indianapolis, Ind.

Thursday, October 5, 3 P.M.

20. Obstipation and Its Radical Treatment. Thos. Chas. Martin, Cleveland, O.

21. Intestinal Auto-Intoxication, Its Prevention and Treatment. Wm. F. Barclay, Pittsburg, Pa.

22. Indigestion in Infants and Children. James H. Taylor, Indianapolis, Ind.

23. Lithiasis. R. Alexander Bate, Louisville, Ky.

24. Nephrolithiasis. A. H. Cordier, Kansas City, Mo.

Friday, October 6, 10:30 A.M.

25. The Therapeutics of Infectuous Conjunctivitus. Dudley S. Reynolds, Louisville, Ky.

26. Supra-Renal Gland as a Therapeutic Agent in Ophthalmology, Otology and Rhinology. Flavel B. Tiffany, Kansas City, Mo.

27. Introversion of the Iris. L. W. Beardsley, St. Louis, Mo.

28. A Contribution to the Study of Lung Reflexes. Marion K. Bowles, Joliet, Ill.

29. The Treatment of Dysentery. J. W. Knowlton, Paint Rock, Ala.

SURGICAL SESSION.

Tuesday, October 3, 3 P.M.

1. Vesico Rectal Anastomosis. J. Frank, Chicago, Ill.

2. Intolerant Ulceration of the Rectum, with Report of Five Cases. Sterling B. Taylor, Columbus, O.

3. Modern Surgical Treatment of Hemorrhoids. Gustavus M. Blech, Chicago, Ill.

4. Hemorrhage from the Rectum and Its Varied Importance as a Symptom. Leon Straus, St. Louis, Mo.

5. Treatment of Certain Ocular Diseases by Excision of the Cervical Sympathetic Gangalia. James Moores Ball, St. Louis, Mo.

6. Urethral Endoscopy. W. R. Blue, Louisville, Ky.

7. Inflammation of the Verumontanum. J. Rilus Eastman, Indianapolis, Ind.

Wednesday, October 4, 10:30 A.M.

8. The Technique of Abdominal Incision, Peritoneal and Extra Peritoneal. S. E. Milliken, Dallas, Tex.

9. Mammoth Ovarian Cysts; Report of Tumor Weighing 245 Pounds. Jas. B. Bullitt, Louisville, Ky.

10. Some Causes of Death After Abdominal Section. Louis Frank, Louisville, Ky.

11. The Value of Prostatic Examination. J. Leland Boogher, St. Louis, Mo.

12. Intestinal Obstruction from Gall Stones. J. Wesley Boveé, Washington, D. C.

13. Obstructive Growths of the Pylorus, with Report of a Successful Case of Pylorectomy. J. E. Allaben, Rockford, Ill.

Wednesday, October 4, 3 P.M.

14. What Becomes of the Medicinally Treated Cases of Appendicitis? Louis Schooler, Des Moines, Iowa.

15. Appendicitis from a Medical Standpoint. I. N. Love, St. Louis, Mo.

16. A Plea for Early Operations in Appendicitis. A. M. Hayden, Evansville, Ind.

17. Surgical Features of Appendicitis. Hal. C. Wyman, Detroit, Mich.

18. A Study of Twenty-Seven Cases of Appendicitis. Frank T. Merriwether, Asheville, N. C.

19. Certain Special Features in Hernia of the Female. T. H. Manley, New York.

Thursday, October 5, 10:30 A.M.

20. Surgery of the Turbinated Bones. J. A. Stucky, Lexington, Ky.

21. Nasal Stenosis Due to Defective Septa and Its Treatment, With or Without Thickening of the Convex Side. John J. Kyle, Indianapolis, Ind.

22. Mastoid Operation, With Report of Cases. Geo. F. Keiper, Lafayette, Ind.

23. Beta-Eucaine as an Anesthetic in Eye Surgery. W. H. Poole, Detroit, Mich.

24. The Surgical Treatment of Chronic Frontal Sinusitis. Richmond McKinney, Memphis, Tenn.

Thursday, October 5, 3 P.M.

25. Observations on Surgery of the Brain, Based on Clinical and Experimental Evidence. Geo. W. Crile, Cleveland, Ohio.

26. Removal of Cervical Sympathetic for Epilepsy, Exophthalmic Goitre, and Glaucoma. Emory Lanphear, St. Louis, Mo.

27. An Arm Saved After Being Run Over by a Railway Locomotive and Crushed. S. L. Kilmer, South Bend, Ind.

28. Suture Materials in Surgery. Joseph Price, Philadelphia, Pa.

Friday, October 6, 10:30 A.M.

29. The General Treatment of Patients Before, During and After Surgical Operations. Fenton B. Turck, Chicago, Ill.

30. The Modern Small-Bore Projectile. Aug. Schachner, Louisville, Ky.

31. The Effects of the Automatic Mauser Pistol. J. D. Griffith, Kansas City, Mo.

32. Surgical Tolerance and Results. F. F. Bryan, Georgetown, Ky.

33. The Treatment of Gonorrhea in the Female. A. Ravogli, Cincinnati, Ohio.

In addition, the Chicago physicians have arranged a large number of clinics which will be exceedingly profitable to those in attendance.

THE Christian Scientists are invading the medical strongholds. A "Christian Scientist," "Eddyite," "Divine Healer" recently got into Bellevue Hospital. He told the patients that the attendant physicians were their worst enemies and were merely experimenting on them for the benefit of the higher classes. The man had elaborately-printed cards, on the back of which was his name and address and a cross in red; also the announcement that he and the Savior were able to cure every manner of disease. Recently a "divine healer" named Dowie, in Chicago, used, in an address delivered on a Sunday evening to 3,400 people, the following words: "Does that associated band of liars that reaches from Hell Gate in New York to the Golden Gate in California, and that aggregation of murderous doctors think it can turn back the works of God? He that turns back the works of God shall be damned to everlasting hell. Do you hear that, you young devils of the press, you band of liars?" He also stated that he had evidence that would hang at least fifty physicians. This related to intentional murders that had been committed in the name of science, and he threatened to prosecute them if they continue the attack upon him.

Practical Therapeutics.

The Uses of Naphtalan.—FRIEDEBERG.* A careful study and investigation of naphtalan and its indications leads the author to the following conclusions: In the treatment of eczematous conditions of the skin it proves to be a most praiseworthy remedy. The same can be said of its application in the treatment of epididymitis. In the treatment of acne and articular rheumatism the remedy proved incompetent. In spite of the recommendation of Thümmler and Hirschkron, naphtalan was found to be far less effectual in the treatment of rheumatism than those remedies in common use. In psoriasis, ulcus cruris, and light cases of pleuritis sicca and exudativa, one is justified in the use of this together with other medicaments. [Naphtalan—not naphthalin—is obtained by fractional distillation of an Armenian naphtha. It is soluble in oils, ether, and chloroform. Analgesic, antiphlogistic, parasiticide].

Preliminary Report Upon the Use of Pure Carbolic Acid in the Treatment of Mastoid Wounds and Chronic Suppuration of the Middle Ear.—W. C PHILLIPS† has for the past three months used pure carbolic acid in those conditions in which necrosis existed, and in the sinuses so often found in mastoid wounds, which are so difficult to heal. The acid was prepared by simply adding enough water to the crystals to hold them in solution. At first, applications were made by means of the cotton probe, but later on, in order to bring the carbolic acid into contact with the tissues in attic cases, a spray apparatus was devised with the tube so finely drawn that it could be introduced into the aural canal and the acid sprayed into the attic and middle ear. In nearly all the cases in which this method of treatment has been adopted the suppurative process has almost immediately commenced to subside. It is advisable to avoid using an excess of acid, thus obviating the necessity for using too much alcohol in washing out and counteracting the effect of the acid. Six cases are briefly cited illustrating these results.

Ipecacuanha in Dysentery.—The treatment of dysentery by large doses of ipecac was discovered as much as twenty years ago. It had its origin in India, and for a considerable time it practically fell into disuse. This was doubtless due to the fact that the dysentery of two decades ago included such a variety of pathologic conditions. Any persistent looseness of the bowels accompanied by tenesmus and blood in the stools was classed among the dysenteries. This is partially true now, but there are a few varieties that have been excluded, notably the amebic dysentery, which is due to a specific cause. In simple dysenteries, Dalgetty's method is of considerable value. The patient is placed in a horizontal position, which is to be maintained four hours, and he is to have no food or drink during the time. A large mustard-plaster is applied over the abdomen and some opium given. In a few minutes this is followed by four ten-grain pills of ipecacuanha. The pills should be freshly made. This treatment is to be repeated at intervals until a cure is effected. At least eight hours must elapse between each series of treatments.

Carbolic Acid in Abscess of the Joints.—PHELPS, before the American Orthopedic Society, reported upon his new method of treating abscess of the joints with carbolic acid. The essential feature of the treatment was the use of Powell's discovery that alcohol was a perfect antidote for carbolic acid. In these cases liquid carbolic acid was injected into the cavity, where it was allowed to remain for two minutes; then the abscess was washed out, first with alcohol and then with sterile water. In every case so treated, except those in which drainage tubes had been used, there was prompt cure. The patients were discharged cured in from three to five weeks, instead of remaining several months, as they would have been compelled to do under the more usual treatment.

A Note on the Employment of Solutions of Toluidin-Blue in the Treatment of External Inflammatory Diseases of the Eye.—VEASEY* has used solutions of toluidin-blue in the treatment of external inflammatory conditions of the eye for some eighteen months, and reports excellent results. The strength of the solution that has given the best results and proved most satisfactory is 1 part to 1000. The eye should first be washed with a boric acid solution and then flushed thoroughly with the toluidin-blue solution. Every particle of mucous and muco-pus is stained a deep blue, and none can remain on the conjunctiva without being detected. The excess of the solution should be washed off with a solution of boric acid. The frequency of application depends upon the copiousness of the discharge. Toluidin-blue has also been employed, with good results, in corneal ulcers and abrasions, dacryo-cystitis, and even as a urethral irrigation in gonorrhea.

Antistreptococci Serum in Puerperal Septicemia.—RICHARDSON† reports a case of puerperal septicemia in which, after employing the usual local treatment with no benefit, antistreptococci serum was tried with a splendid result. The patient, at the time the serum was injected, had a temperature of

*Centralblatt für innere Medicin, August 5, 1899.
†N. Y. Med. Rec., Sept. 2, 1899.

*Pennsylvania Medical Journal, August, 1899.
†Medical Council, September, 1899.

105°; pulse, 140. In four hours her temperature had fallen 1°, and pulse slower. Gradual improvement throughout the day. The following morning both temperature and pulse were normal and remained so. The serum may not do good in all cases, but should certainly be thought of in all severe cases.

On Ozone and Its Generation by the Static Current for Therapeutic Use.—J. M. BLEYER,* after briefly considering the history of ozone, concludes that we may recognize in ozone a sort of concentrated oxygen with this peculiar property: it possesses an extraordinary readiness to part with its characteristic third atom and so disappear as ozone, two-thirds of its weight remaining as oxygen. It was found that a current strength of forty milliamperes passed through the body of a healthy rabbit for ten minutes, caused a considerable increase in the quantity of ozone in the blood, taken from the carotid arteries over that found in normal blood. From many tests it is believed that the galvanic current, as it presses through the blood, decomposes the chlorides and forms hypochlorites or some highly oxidized compounds of chlorine. The tincture of the chloride of iron gives the best results in combination with inhalations of ozone or the application of the galvanic current over the stomach and front of the chest wall one-half hour after the dose has been given. The good effects of the iron and ozone upon anemic patients are wonderful to witness; the micrometric scale will show the increase of corpuscles in from one to two weeks in a remarkable manner. A simple ozone apparatus, for attachment to a static machine, is described. It consists of a glass globe which has two poles within it, attached by chain to a static machine. These poles have silver points so arranged as to produce a fine and large brush discharge which gives off a large quantity of ozone. The ozone is purified by an oil which absorbs all impurities and allows it to pass on in a pure state. A small reservoir is attached just outside of the globe, which may be charged by a saturated piece of cotton containing any of the essential oils, giving the ozone thereby a more pleasant and therapeutic value.

Experiments with Paraldehyde.—C. C. HERSMAN† reports the results of three series of experiments made to test the value of this remedy. From the first series he concludes that paraldehyde is not to be considered as a good hypnotic. Doses of .5 drachm and one drachm acted better than large doses. Headache was less liable to follow. He could find no property which makes it equal to other remedies at our command. From testing it as a germicide he believes paraldehyde to be effectual, but would not determine the minimum per cent. at which it will act as such. The third series of experiments seemed to show that it is at least partially a physiologic antidote to strychnin. He has used it in acute alcoholism, with marked hypnotic effects when other hypnotics have failed to produce sleep. In properly selected cases it acts well, but as a universal remedy it is not considered as good as some others at our command.

Cataphoric Treatment of Cancer.—G. B. MASSEY* reaches the following conclusions on the subject: 1. The massive diffusion of nascent salts within a growth or cavity of the body by an electric current constitutes a novel therapeutic procedure of great value in the destruction of foci of malignant or non-malignant germ growths, when said growths are so situated as to permit of penetration and drainage. 2. This cataphoric destruction of the germs of a primary cancerous growth in situ, including outlying colonies and so-called roots of prolongation, permits the preservation of the unaffected portions of the organ in which it is situated, and offers greater security against a recurrence of the growth than efforts to remove the living malignant organisms by cutting operations. 3. While the cataphoric method may be employed as a palliative in non-operable malignant growths, and may at times cure them, its chief value is in the total destruction of the malignant germs in the early stages of primary growths, and in the same stages of purely local recurrences. His summary of cases, showing results, is as follows: Operable cases—Cured, 8; probably cured, 1; failed to cure, 1. Inoperable cases—Cured, 2; probably cured, 1; failed to cure, 13. Cured or probably cured, 12 cases; failed to cure, 14 cases.

Encaine B as a Local Anesthetic.—HAMILTON† uses eucaine B hypodermically as an anesthetic in surgical operations of some magnitude with very satisfactory results. Among the cases reported are lipoma, hydrocele, umbilical hernia, Thiersch grafting, strangulated inguinal hernia, etc. With eucaine B one need not fear the cardiac and other dangerous symptoms so common in the use of cocaine, nor the burning and pain following injections of eucaine. A 2 per cent. solution is recommended in preference to stronger ones.

Camphoral.—If any of our readers is in doubt as to what to do for a stubborn case of nasal catarrh, or how to treat locally an obstinate case of hemorrhoids, or pruritis ani or vulvæ, we would suggest that he correspond with the Camphoral Chemical Co., of Parkersburg, W. Va., who claim that their remedy, Camphoral, is a specific for such troubles.

*N. Y. Med. Rec., Sept. 9, 1899.
†Jour Am. M. A., Sept. 9, 1899.

*Jour. Am. M. A., Sept 9, 1899.
†Lancet, August 26, 1899.